

An Interest-Calculating Macro
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Hate standing in line at your bank's teller window? At Premium Federal Savings Bank in Gibbsboro, New Jersey, there are no tellers, no branches and no drive-through windows. At this bank, business is done solely by telephone, mail and WordPerfect.

How does this bank-without-walls work? Instead of spending money on building branch offices, Premium invests it. Without the expense of a branch network, Premium can pay its customers more on their certificates of deposit than other banks serving the area.

Because there are no branches, Premium relies heavily on the mail system. Says Michael Devlin, president of Premium, "Customers aren't going to see us face-to-face, so we try to use technology as much as we can to personalize the service. WordPerfect is an important part of this process."

Here's a macro from Premium that you can use to calculate compounded interest earnings on your own savings. It lets you know how much your investment will earn in a year. When you run this macro, you simply type in the deposit amount, the interest rate, the compounding frequency (daily, monthly or quarterly), and the macro takes care of the rest. If you so choose, it will even insert the final amount into the document. For example, the minimum deposit at Premium is \$5,000. This deposit, at an interest rate of 5% compounded daily, will be worth \$5256.34 at the end of the year. The macro makes this calculation.

Note: The macro calculates one-year investments only.

Creating the macro

The macro is included as INTEREST.WPM.

Using the macro

To use the macro, at any document screen simply press Macro (Alt-F10), type "interest" and press (Enter). You'll first receive the prompt, "Enter the deposit amount." Type the amount of your deposit and press (Enter). At the next prompt, "Enter the interest rate (Example: .045 for 4.5%):," type the interest rate you'll receive on that deposit and press (Enter). As shown in the prompt's example, you need to be sure to type a period (.) and a zero (0) first. This is very important! If you forget the zero, you'll be disappointed when you fail to earn the thousands of interest dollars you thought you were going to get. As another example, for a 5% interest rate, you'd type .05 and press (Enter).

The last prompt you'll receive asks how often the interest is compounded – daily (365 times a year), monthly (12 times a year) or quarterly (4 times a year). Type the letter of your choice, or simply press (Enter) to default to "Daily." If you choose "Daily," you will be asked if it's a leap year. Once you make your choice, the macro takes care of the rest and calculates the final dollar amount.

At that point, you can answer (Y) Yes if you'd like to insert the final dollar amount into the document on-screen. Otherwise, press (N) No – or any other key – to quit.

Note: Calculating the interest compounded daily takes a few minutes.

Explaining the macro

Lines 1-4 use the {TEXT} and {CHAR} commands to ask questions. Your answers are assigned to the named variable between the command and the first tilde (~). For example, if you answer "5,000" to the first question, "5,000" is assigned to the variable "Deposit." This information is then used later on in the macro.

After you choose how often you want the deposit compounded with the interest rate (lines 3-4), your answer is evaluated by the {CASE CALL} command on lines 5-6. For example, if you chose "m" for monthly, then {LABEL}Month~ on line 32 is called and the variable "Compound" is assigned the value of "12," since that's how often your monthly interest would compound in the course of a year. The {RETURN} command on line 34 returns back to the end of line 6 and the macro continues. Similarly, {LABEL}Quarter~ (line 35) and {LABEL}Daily~ (Line 38) are called the same way, and the variable "Compound" is assigned either "4," "365" or "366" if it's a leap year.

Lines 7-12 set up the formula for the calculation. First, after the display of the macro is turned off, an endnote is created and a table is set up to do the calculation. (Using an endnote means if you have a document on-screen when the macro is running, it won't be disturbed.) Line 11 actually inserts the formula, which is: Cell A1 (the deposit amount) multiplied by Cell B1 (the interest rate), divided by {VARIABLE}Compound~. That result is then added back to the deposit. Line 12 then inserts the interest rate into the appropriate cell.

Lines 13-20, which contain the {FOR} command, do the actual calculation. This is repeated as many times as it is compounded. Lines 14-15 give you a constant prompt to let you know the status of the calculation. This can be important, especially if you choose "Daily." This means that the calculation has to be run 365 (or 366) times; these two lines keep you posted on how many times the calculation has been run. Lines 16-19 go to Cell A1 and insert the amount of the deposit. The table is then calculated using the formula described above, and the final result is reassigned back to variable "Deposit."

Lines 21-31 finish the macro by assigning the final amount to variable "Deposit," exiting the endnote screen, deleting the endnote and prompting you with the final dollar amount. You are also given the choice as to whether or not you want this amount inserted into the document on-screen at the cursor.

This macro isn't only valuable to the bank-without-walls. It can also be valuable to you. The next time you're shopping around for the best return on your savings, use Premium's macro to make sure you get the most for your money.